

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A computerized method for producing code in an architecture description language, said method comprising ~~the steps of~~:
  - a. reading an opcode summary table;
  - b. analyzing said opcode summary table to determine ~~the~~ a layout of said opcode summary table;
  - c. generating code for an instruction in architecture description language format; and
  - d. repeating said generating ~~step~~ for each line in said opcode summary table, resulting in an architecture description language (ADL) representation of the opcode summary table such that the ADL representation generates a representation of structure.
2. (Original) The method of claim 1 where the opcode summary table is provided in a spreadsheet.
3. (Original) The method of claim 1 where the opcode summary table is provided in a comma separated value format.
4. (Currently Amended) A computerized method for producing code in an architecture description language format, said method comprising ~~the steps of~~:
  - a. ~~reading~~ reading an opcode summary table;
  - b. ~~creating a plurality of output files~~;
  - e. ~~analyzing~~ analyzing said opcode summary table to determine ~~the~~ a layout of said opcode summary table;

- d. —determining ~~the~~ a beginning of a group from said opcode summary table;
- e. —generating root code for ~~the~~ a hierarchy in architecture description language format based on said grouping, wherein the root code in architecture description language generates a representation of structure;
- f. —cycling through each group to generate detailed code in architecture language format; and
- g. —repeating said cycling ~~step~~ until ~~the~~ an end of the opcode summary table is reached; and
- h. —~~closing said plurality of output files.~~

5. (Original) The method of claim 4 where the opcode summary table is provided in a spreadsheet.

6. (Original) The method of claim 4 where the opcode summary table is provided in a comma separated value format.

7. (Currently Amended) The method of claim 4 where the opcode summary tablet is pre-formatted such that the opcodes are separated into groups prior to ~~be~~ being read.

8. (Currently Amended) The method of claim 4 where said cycling step further comprises determining ~~the~~ a presence of sub-groups within said group and generating detailed code for each sub-group within said group.

9. (Currently Amended) A computer program embodied in at least one machine-readable medium, the computer program comprising:

a first computer code section ~~for reading to read~~ an opcode summary table having a plurality of entries representative of a like plurality of microprocessor instructions;

a second computer code section ~~for producing to produce~~ a grouping of at least two of said entries in accordance with a grouping criteria; and

a third computer code section ~~for generating to generate~~ an encoded representation of said grouping, wherein the encoded representation of said grouping includes an Architecture Description Language representation that generates a representation of structure.

10. (Currently Amended) A computerized method for producing code in an architecture description language, said method comprising ~~the steps of:~~

reading an opcode summary table;

analyzing said opcode summary table to determine ~~the~~ a layout of said opcode summary table and constructing an opcode super group based on at least two opcode groups identified by said analyzing; and

generating code for an instruction in architecture description language format based on said opcode super group and which includes a representation of structure.

11. (Currently Amended) A computerized method for producing code in an architecture description language format, said method comprising ~~the steps of:~~

reading an opcode super group table;

~~creating a plurality of output files;~~

analyzing said opcode super group table to determine a layout of said opcode super group table;

determining a presence of a sub-group from said opcode super group table;

generating root code in architecture description language format based on the sub-group;

cycling to generate detailed code for the sub-group in architecture description language format; and

repeating said cycling and determining until ~~the~~ an end of the opcode super group table is reached, including generating a representation of structure using the architecture description language format; and

~~closing said plurality of output files.~~

12. (Currently Amended) A computer program embodied in at least one machine-readable medium, the computer program comprising:

a first computer code section ~~for reading to read~~ an opcode summary table having a plurality of entries representative of a like plurality of microprocessor instructions;

a second computer code section ~~for producing to produce~~ a first grouping of at least two of said entries in accordance with a grouping criteria;

a third computer code section ~~for producing to produce~~ a second grouping of at least two of said entries in accordance with a grouping criteria;

a fourth computer code section ~~for producing to produce~~ a super grouping of the first and second grouping; and

CI a fifth computer code section ~~for generating to generate~~ an encoded representation of said super grouping, wherein the encoded representation of said grouping includes an architecture description language representation that generates a representation of structure.

13. (Previously Presented) The method of claim 1, wherein the representation of structure comprises an ADL representation of a microprocessor.

14. (Previously Presented) The method of claim 1, wherein the representation of structure comprises an ADL microprocessor representation utilizable by an assembler generator.

15. (Previously Presented) The method of claim 1, wherein the representation of structure comprises an ADL microprocessor representation utilizable by a simulator generator.

16. (New) A method for producing code in an architecture description language (ADL), the method comprising:

reading an opcode summary;  
analyzing the opcode summary to determine a layout of the opcode summary;  
generating code for an instruction in ADL format;  
repeating the generating for each line in the opcode summary, resulting in an ADL representation of the opcode summary; and  
using the ADL representation as input to generate a simulator tool.

17. (New) A computerized method for producing code in an architecture description language (ADL) format, the method comprising:

C-1  
reading an opcode summary;  
analyzing the opcode summary to determine a layout of the opcode summary;  
determining a beginning of a group from the opcode summary;  
generating root code for a hierarchy in ADL format based on the grouping;  
cycling through each group to generate detailed code in ADL format;  
repeating the cycling until an end of the opcode summary is reached; and  
using at least some of the code in ADL format as input to generate a simulator tool.

18. (New) An article of manufacture, comprising:

a machine-readable medium having instructions stored thereon, the instructions including:

first instructions to read an opcode summary having a plurality of entries representative of a like plurality of microprocessor instructions;

second instructions to produce a grouping of at least two of the entries in accordance with a grouping criteria;

third instructions to generate an encoded representation of the grouping in ADL format; and

fourth instructions to use the encoded representation in ADL format to generate a simulator tool.

19. (New) A system, comprising:

a means for reading an opcode summary;

a means for analyzing the opcode summary to determine a layout of the opcode summary table;

CI a means for generating code for an instruction in architecture description language (ADL) format; and

a means for repeating the code generation for sections of the opcode summary, resulting in an ADL representation of the opcode summary that includes representation of structure.

20. (New) The system of claim 19, further comprising means for using the ADL representation to generate a means for simulating operation of the structure.

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